

CLAIMS

1. A battery backup apparatus for use with a barrier movement operator; comprising:

5 a battery having first and second terminals

first and second backup

ports for receiving an input DC voltage from the barrier movement operator therebetween during normal operations by the barrier movement operator;

10 a conduction path connecting the second back up port to the second battery terminal;

a battery charging circuit connecting the first input port to the first battery terminal for charging the battery when the input DC voltage exceeds a predetermined voltage; and

15 a unidirectional isolation device connecting the first battery terminal to the first backup port.

2. The battery backup apparatus of claim 1 comprising an audible signaling device.

20 3. The battery backup apparatus of claim 2 comprising apparatus for enabling the audible signaling device in response to current flowing from the battery to the first backup port via the unidirectional isolation device.

4. The battery backup apparatus of claim 1 comprising one or more visual signaling devices.

5. The battery backup apparatus of claim 1 wherein the battery charging device comprises circuitry for limiting a current applied to the first battery terminal.

5 6. The battery backup apparatus of claim 5 wherein the circuitry for limiting, limits the current to an amount less than a maximum amount expected from the barrier movement operator.

7. The battery backup apparatus of claim 1 comprising cut out circuitry for disconnecting the first battery terminal from the unidirectional
10 isolation device.

8. The battery backup apparatus of claim 1 comprising cutout circuitry for disconnecting the first battery terminal from the battery charging circuit.

9. The battery backup apparatus of claim 1 comprising circuitry for
15 selectively disconnecting the first battery terminal from the first backup port when the first backup port is disconnected from the input DC voltage.

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